

Federal ✓

**CONNECTICUT LOCAL BRIDGE PROGRAM**

**Fiscal Year 2007**

**PRELIMINARY APPLICATION**

**TOMLINSON AVENUE over**

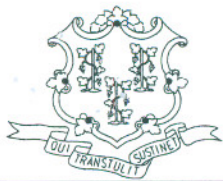
**QUINNIPIAC RIVER**

**Plainville, CT**

**ConnDOT Bridge No. 04546**

Prepared for the  
Connecticut Department of Transportation  
Federal Local Bridge Program  
Newington, Connecticut





# CONNECTICUT DEPARTMENT OF TRANSPORTATION

Stephen E. Korta, II, Commissioner



## PRELIMINARY APPLICATION FOR THE LOCAL BRIDGE PROGRAM

Preliminary application is hereby made by the Town/City/Borough of **Plainville** for possible inclusion in the Local Bridge Program for Fiscal **Year 2007** for the following structure:

**Tomlinson Avenue over Quinnipiak River**

Bridge Location: **Over Quinnipiak River**

Bridge Number: **04546**

Length of Span: **12 feet**

Sufficiency Rating: **60.98**

Priority Rating: **63.09**

Evaluation & Rating Performed by:     X     State Forces          Others

If Others, Name of Professional Engineer: \_\_\_\_\_

Connecticut Professional Engineers License Number: \_\_\_\_\_

Engineering Firm: \_\_\_\_\_

Engineer's Address: \_\_\_\_\_

Description of Existing Condition of Structure: *(attach description)*

Description of Project Scope: **A** *(note repair code; attach narrative/preliminary plans & specifications).*

Name of Municipal Official to Contact *(name & title)*: **John Bossi, P.E., Town Engineer**

Mailing Address: **Town of Plainville, Municipal Center**  
**1 Central Square, Plainville, CT 06062**

Telephone: **(860) 793-0221**

FAX: **(860) 793-2285**

E-mail:     bosse.plainville.ct.gov    

### Preliminary Cost Figures:

Preliminary Engineering Fees (Include Breakdown of Fees) \$     161,148      
*(Not to Exceed 15% of Construction Costs)*

Rights-of-Way Cost (If Applicable) \$     10,000    

Municipally Owned Utility Relocation Cost \$     N/A    

Estimated Construction Costs (Include Detailed Estimate) \$   1,074,324  

Construction Engineering (Inspection, Materials Testing) \$     161,148      
*(Not to Exceed 15% of Construction Cost)*

Contingencies *(10% of Construction Costs Only)* \$     107,432    

Total Estimated Project Cost \$   1,514,052

**Preliminary Application**  
Local Bridge Program, FY 2007

Page #2

**Financial Aid Data:**

Federal Reimbursement: *(Limited to qualifying bridges – See Appendix1)*  
Total Estimated Project Cost multiplied by 80%:

Project Reimbursement Request \$ 1,211,241

State Local Bridge Project Grant: *(Cannot be combined with Federal reimbursement)*

Allowable Grant Percentage \_\_\_\_\_ % of Total Cost.

Project Grant Request \$ \_\_\_\_\_

State Local Bridge Project Loan: *(Maximum 50% of total project cost)*

Project Loan Request \$ \_\_\_\_\_

**Schedule:** (Anticipated Dates)

Public Hearing Conducted:	<b>April 30, 2008</b>
Design Completion:	<b>June 30, 2008</b>
Property Acquisition Completion:	<b>October 31, 2008</b>
Utilities Coordination Completion:	<b>June 30, 2008</b>
Construction Advertising:	<b>December 30, 2008/February 28, 2009</b>
Supplemental Application Submission:	<b>April 30, 2009</b>
Start of Construction:	<b>April 30, 2010</b>
Completion of Construction:	<b>November 30, 2010</b>

I hereby certify that the above is accurate and true, to the best of my knowledge and belief.

Signature:   
(Chief Elected Official, Town Manager, or other Officer Duly Authorized)

Date: 5/18/06

Return completed applications to: Mr. Stanley C. Juber  
Administrator of the Local Bridge Program  
Connecticut Department of Transportation  
2800 Berlin Turnpike, P.O. Box 317546  
Newington, Connecticut 06131-7546



## **2. Description / Existing Condition**

The bridge carrying Tomlinson Avenue over the Quinnipiac River consists of two asphalt coated corrugated metal elliptical arch pipes and approximately 30 inches of ballast with a bituminous concrete wearing surface. The original structure was built in 1968. There have been a number of minor maintenance repairs over the years; however, there is no record of rehabilitation. The existing bridge travel way width is approximately 28 feet and is referenced as ConnDOT Bridge No. 04546. The structure has an overall length of 25 feet with a maximum span of 12 feet and is eligible for State and Federal funding under the Local Bridge Program for the fiscal year 2007.

### **Deck, Superstructure, Substructure (Rating=N)**

According to the ConnDOT bridge inspection report, dated August 27, 2004, the deck, superstructure, and substructure have ratings = N (typical for a culvert). The bituminous overlay is in good condition (rating=7). However, the bituminous overlay shows longitudinal and transverse cracks and past crack sealing. There is a bituminous concrete lip curb on the north side only that shows open cracks. There is a water main located within the ballast on the north side.

### **Channel and Channel Protection (Rating=6)**

According to the ConnDOT bridge inspection report, dated August 27, 2004, the channel bank is in satisfactory condition (rating=6). The channel scour has not changed from the last inspection report, which noted that previous scour has undermined the culvert mitered ends. There is heavy embankment erosion at the outlet and downstream with areas of exposed tree root systems and trees leaning out over channel. The stream enters the structure at a slight angle to the structure's centerline from the west and is slightly diverted by encroachment with vegetation upstream & sand downstream at the southeast.

### **Culverts & Retaining Wall (Rating=4)**

According to the ConnDOT bridge inspection report, dated August 27, 2004, the culverts are in poor condition (rating=4). Both of the metal pipe barrels show some missing nuts at random plate connections and worn off protective coating mostly in the lower area. The invert in both barrels shows moderate rusting throughout. The invert in barrel #2 at the outlet mitered end shows areas of severe rusting and perforation holes ranging from a few inches to 8 ½ inches long by 1 to 2 inches wide.

### **Approach Condition (Rating=7)**

According to the ConnDOT bridge inspection report, August 27, 2004, the approach is in good condition (rating=7). The bituminous concrete pavement shows cracks and past crack sealing. Metal beam rail exists along both sides and shows minor scrapes.



### **3. Proposed Condition**

According to the ConnDOT bridge inspection report, August 27, 2004, the existing structural evaluation rating is 4 (meets minimum tolerable limits to be left in place as-is). Based on the poor structural condition, the bridge warrants a complete replacement. The proposed replacement would include the following:

- 1) Remove the existing structure in its entirety.
- 2) Install new reinforced concrete abutments and wingwalls founded on steel piles.
- 3) Install a new prestressed concrete deck unit superstructure with a 28' travelway.
- 4) Install a new bridge rail system on new reinforced concrete parapets.
- 5) Place membrane waterproofing over the entire structure.
- 6) Install new guide railing and approaches.

Estimated construction cost for the work is \$1,074,324.00. A detailed estimate is provided on the following pages.

**Town of Plainville**  
**Tomlinson Avenue over Quinnipiac River**  
**Bridge No. 04546**  
**Federal Local Bridge Program**

**Preliminary Cost Opinion**

Item No.	Description	Unit	Estimated Quantity	Unit Cost	Extended Cost
<b>Structure Items</b>					
1A	Bituminous Concrete Class 1	Ton	10	\$80.00	\$764
1B	Bituminous Concrete Class 2	Ton	5	\$110.00	\$550
2	Membrane Waterproofing	S.Y.	113	\$20.00	\$2,258
3	Remove Existing Structure	L.S.	1	\$25,000.00	\$25,000
4	Class "A" Concrete	C.Y.	377	\$500.00	\$188,634
5A	Furnish Steel Piles	Lb.	177010	\$0.35	\$61,954
5B	Drive Steel Piles	L.F.	2394	\$20.00	\$47,878
6	Deformed Steel Bars	LBS.	17357	\$1.50	\$26,035
7	Elastomeric Bearing Pads	Ea.	32	\$250.00	\$8,000
8	Prestressed Concrete Deck Units	L.F.	240	\$225.00	\$54,000
9	Granite Curb	L.F.	60	\$35.00	\$2,100
10	Metal Bridge Rail	L.F.	60	\$240.00	\$14,400
11	Structure Excavation	C.Y.	1101	\$30.00	\$33,025
12	Pervious Structural Backfill	C.Y.	835	\$40.00	\$33,391
13	Sheeting	S.Y.	400	\$25.00	\$10,000
				Structure Subtotal:	\$507,988
				20% Contingency:	\$101,598
				<b>Structure Total</b>	<b>\$609,586</b>
<b>Highway &amp; Stream Channel</b>					
1	Unsuitable Excavation	C.Y.	89	\$30.00	\$2,666
2	Borrow	C.Y.	257	\$20.00	\$5,143
3	Maintenance and Protection of Traffic	L.S.	1	\$15,000.00	\$15,000
6	Roadway Excavation	C.Y.	5779	\$15.00	\$86,687
7	Subbase	C.Y.	839	\$30.00	\$25,174
8	Formation of Subgrade	S.Y.	1099	\$3.00	\$3,296
9	Bituminous Concrete	TON	548	\$80.00	\$43,829
10	Mobilization	L.S.	1	\$50,000.00	\$50,000
12	Barricade Warning Lights	EA./DAY	780	\$1.50	\$1,170
13	Temporary Precast Concrete Barrier Curb	L.F.	133	\$35.00	\$4,657
14	Signs	S.F.	7	\$20.00	\$130
15	Metal Beam Rail (Type R-B)	L.F.	187	\$25.00	\$4,673
16	Guide Rail Anchors	EA.	4	\$650.00	\$2,600
17	Clearing and Grubbing	L.S.	1	\$5,000.00	\$5,000
18	Water Pollution Control	Est	1	\$10,000.00	\$10,000
19	Erosion and Sedimentation Control	L.F.	844	\$6.00	\$5,065
20	Construction Staking	L.S.	1	\$7,500.00	\$7,500
21	Riprap	C.Y.	157	\$80.00	\$12,589
22	Catch Basins	EA..	4	\$1,500.00	\$6,000
24	Granite Stone Transition Curbing	L.F.	100	\$30.00	\$3,000
25	Turf Establishment / Topsoil	S.Y.	1296	\$10.00	\$12,960
26	Construction Trailer	Mo.	9	\$1,400.00	\$12,600
				Highway & Stream Channel Subtotal:	\$319,739
				20% Contingency:	\$63,948
				<b>Highway &amp; Stream Channel Subtotal</b>	<b>\$383,687</b>
<b>2006 Estimated Total Construction Cost:</b>					<b>\$993,272</b>
<b>Adjusted for Construction Year 2008 @ 4% Per Year</b>					<b>\$1,074,324</b>

# STRUCTURE NO. 04546

TOMLINSON AVENUE  
over  
QUINNIPIAC RIVER  
PLAINVILLE

*Routine Inspection*  
on  
8/27/2004

*Inspected by Team 5*  
*for Area 10*

<b>TEAM:</b>	Forwarded to Senior	05-Ned Statchen	Date	11/8/04
<b>SENIOR:</b>	Reviewed by Senior	S Dumas	Date	1/18/05
	BMM Required		NO	
	Town Bridge		✓	
	Rating <= 5 (Items 58,59,60 or 62)		✓	
	Forwarded to Supervisor	S Dumas	Date	2/18/05
	Forwarded to "To Be Copied Drawer"	<input type="checkbox"/>	Date	
	Date BRI-19 Entered		1/18/05	
<b>SUPERVISOR:</b>	Reviewed by Supervisor	S Dumas	Date	2/18/05
<b>SUPPORT:</b>	Date Copies Made		BMM No	



STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

INSPECTION REPORT TRANSMITTAL FORM  
Form BRI-27, Rev. 6/00

Structure No.	04546	Town	PLAINVILLE
Inspection Date	8/27/2004	Inspectors	Team 5

## TABLE OF CONTENTS

### Loose Forms (not bound in report)

Number of Sheets  
Enclosed

Maintenance Memo	0
Flagging Memos	0
PONTIS Element Data Collection Form	1
Plan Sheets	0

Already on file ☐

### Bound Report Pages

Title Cover Sheet	0	1 BIRM sheet
Table of Contents	1	✓
Executive Summary	0	
Field Notes	0	1
Calculations:		
Load Rating Evaluation	0	
Quantities & Cost Estimate	0	
Photo Sheets	5	
Photo Images	10	

### Forms

BRI-18, Bridge Inspection Form	3
BRI-19, Highway Bridge Inventory Form	2

### Comments:

(1) Attached sheet.

Need special inspection - monitor perforations.  
Next inspection - note # of perforations - location from end.

Bridge Number

04546

Inspected By:

P. Talmont &amp; K. Weir

Sufficiency Rating

87.65

Previous Inspection Date

8/26/2002

STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION  
BRIDGE SAFETY & EVALUATION

## STRUCTURE EVALUATION

SHEET 1 OF 2 FORM BRI-19 - REV 10/00

BS&amp;E Received

☐

Data Entry By:

Dud

SHEET 2 OF 7 (INSP. REPORT)

Copies Made

☐

Data Entry Date:

1/18/05

90) Inspection Date 08/27/04 Inspection Team 10/05  
Indepth Insp 10/24/2000 Deck Survey  
91) Frequency 24 Class 01  
Access 0 Flagman 0

## CRITICAL FEATURE INSPECTIONS

Type	Frequency	Team	Date
Fracture:			
Uwater:			
Special:			

RED FLAG

## IDENTIFICATION

Bridge Name

PLAINVILLE

Town Name

Town Code

60120

5) Inventory Route:

A) Record Type

1

B) Signing Prefix

5

City Street

D) Route Number

00000

E) Directional Suffix

0

NA

C) Level of Service

0

None of the bel

6) Feature Intersected

QUINNIPIAC RIVER

7) Facility Carried:

TOMLINSON AVENUE

9) Location

600' FROM CYRENUS STREET

11) Milepoint

1.69 Miles

16) Latitude

41 deg

39 min

48 sec

deg

min

sec

17) Longitude

72 deg

51 min

12.00 sec

deg

min

sec

98) Border Bridge:

A) State Code

01

B) Percent Responsibility

%

C) Border Town Name

99) Border Bridge Structure No

## STRUCTURE TYPE AND MATERIAL

43) Structure Type, Main:

A) Material

3

Steel

B) Design Type

19

Culvert (includes fram

44) Structure Type, Approach:

A) Material

0

Other

B) Design Type

0

Other

45) Number of Spans, Main Unit

2

46) Number of Approach Spans

0

107) Deck Structure Type

N

Not Applicable

108) Wearing Surface/Protective System:

A) Type of Wearing Surface

N

Not Applicable

B) Type of Membrane

N

Not Applicable

C) Type of Deck Protection

N

Not Applicable

## AGE AND SERVICE

27) Year Built

1968

106) Year Reconstructed

0000

42) Type of Service:

A) On

Highway

B) Under

5 WATERWAY

28) Number of Lanes:

A) On

2

B) Under

0

29) Average Daily Traffic

2000

109) Percent Truck

2 %

30) Year of ADT

1990

19) Bypass, Detour Length

2 miles

## GEOMETRIC DATA

48) Length of Max Span

12 ft

49) Structure Length

25 ft

50) Curb or Sidewalk Widths:

A) Left

0.0 ft

B) Right

0.0 ft

51) Brg Rdwy width, curb-curb

0.0 ft

52) Deck Width, Out-Out

0.0 ft

32) Approach Roadway Width

28 ft

33) Bridge Median

0

No Median

Deck Area

1788 sqft

34) Skew Angle

19 deg

35) Structure Flared

0

10) Inv. Rte. Min. Vert Clearance

99 ft

99 in

47) Log Inv. Rte. Total Horiz Clr.:

31.5 ft

47) RLog Inv. Rte. Total Horiz. Clr.:

ft

53) Min Vert Clearance Over Bridge

99 ft

99 in

54) Min Vert Under Clearance

N

Ref

0 ft

0 in

55) Min Lat Under Clearance on Right

N

Ref

99.9 ft

56) Min Lat Under Clearance on Left

N

Ref

0.0 ft

## BRIDGE COMMENTS



CLASSIFICATION	
112) NBIS Bridge Length	Yes
104) Highway System	0 Off System
26) Functional Class	19 Urban Local
100) Defense Highway	0 Not Defense Highway
101) Parallel Structure	N No parallel structure exists
102) Direction of Traffic	2 2-way traffic
103) Temporary Structure	
110) Designated National Network	0 Not on national network
20) Toll	3 On Free Road
21) Maintain	3 Town or Township Highway Agency
22) Owner	3 Town or Township Highway Agency
Report Class	L LOCAL
37) Historical Significance	5 Bridge is not eligible for National Register

WATERWAY	
DrainageBasinCode	5200
38) Navigation Control	0 No navigation control on waterway
39) Navigation Vert Clr.	0
116) Vert-Lift Brg Nav Min	
111) Pier Abutment Protection	
40) Navigation Horiz Clr.	0

PROPOSED IMPROVEMENTS	
75A) Type of Work Proposed	
75B) Work Done By	
76) Length of Struct. Improvement	ft
94) Bridge Improvement Cost	\$
95) Roadway Improvement Cost	\$
96) Total Project Cost	\$
97) Year of Improvement Cost Est.	
114) Future ADT	
115) Year Future ADT	
List No.	Project No.
	Advised

POSTED SIGNS & UTILITIES	
Other Posted Signs 1	
Other Posted Signs 2	
Actual P.L. Single Unit Truck	tons
Rec. P.L. Single Unit Truck	tons
Actual P.L. Semi-Trailer Truck	tons
Rec. P.L. Semi-Trailer Truck	tons
Rec. P.L. All Vehicles	tons
Posted Vert Clearance On Bridge	ft in
Posted Vert Under Clearance	ft in
Posted Speed Limit	30 mph
Utility	
Utility	3 Electric

## STRUCTURE EVALUATION

SHEET 2 OF 2 FORM BRI-19 REV 10/00

SHEET 3 OF 7 (INSP. REPORT)

Bridge Number **04546** NBIS Length  
 Town Name **PLAINVILLE** Yes 25  
 Facility Carried **TOMLINSON AVENUE**  
 Feature Crossed **QUINNIPIAC RIVER**

Inspected By: P. Talmont & H. Weir

LOAD RATING AND POSTING	
31) Design Load	0
63) Operating Rating Type	1
64) Operating Rating	99.0
65) Inventory Rating Type	1
66) Inventory Rating	65.0
Evaluation Code	L
Year of Evaluation	2000
70) Bridge Posting	5
41) Structure Status	A ✓
Open, no restriction	

CONDITION		APPRAISALS	
58) Deck	Rating By	67) Structure Evaluation	Rating By
59) Superstructure	N ✓ DT	68) Deck Geometry	N ✓ DT
60) Substructure	N ✓ DT	69) Under Clear Vert & Horiz	N ✓ DT
61) Channel & Chan. Protection	6 ✓ DT	71) Waterway Adequacy	5 ✓ DT
62) Culverts	5 ✓ DT	72) Approach Rdwy Alignment	8 ✓ DT
	4	113) Scour Critical	8

Items 58 Thru 72 Checked By: S. Dumas 1/16/01

36) Traffic Safety Features:	
A) Bridge Railings	N ✓ DT
B) Transitions	N ✓ DT
C) Approach Guardrail	N ✓ DT
D) Approach Guardrail End	N ✓ DT

OTHER FEATURES	
Fence Required	No
Fence Present	No
Fence Height	0.0 ft
Fence Type	
Fence Material	
Fence Top Type	
Barrel Ladder	No
Stand Pipes	No
Cat Walks	No
Movable Inspection System	No
Loose Concrete Checked?	No

INSPECTION COMMENTS	
Proposed Next Indepth Insp Year	2010
REVIEWED BY:	<u>Sandra G Dumas</u> Date <u>1/16/01</u>



# Connecticut Department of Transportation

## Bridge Inspection Report BRI-18

3 of 7

BRIDGE #: **04546**

INSPECTION DATE:

**8/27/2004**

INSPECTION TYPE:

**Routine**

PREVIOUS INSPECTION DATE:

**8/26/2002**

SNOOPER REQUIRED:

**No**

INSPECTION PERFORMED BY:

**Team 5**

SNOOPER USED:

**No**

TOWN:

**PLAINVILLE**

FEATURE CARRIED:

**TOMLINSON AVENUE**

YEAR BUILT:

**1968**

LOCATION:

**600' FROM CYRENUS STRE**

FEATURE INTERSECTED

**QUINNIPIAC RIVER**

YEAR REBUILT:

**0**

MAIN MATERIAL:

**Steel**

MAIN DESIGN:

**Culvert (includes frame culv**

### INSPECTION VISITS:

Inspection Date: **8/27/2004**

Start Time: **8:50 AM**

Temperature: **68** ° F

End Time: **10:00 AM**

### INSPECTORS:

Inspector: **D. Talmont**

Task: **Routine Inspection**

Inspector: **K. Weir**

Task: **Routine Inspection**

### 58. DECK

OVERALL RATING

**P**

#### RATING

OVERLAY

**7**

Bituminous concrete over +/- 30 inches of ballast.

Shows transverse and longitudinal cracks & past crack sealing.

DECK STR. CONDITION

**N**

CURBS

**6**

Bituminous concrete lip curb on north side only, shows open cracks.

MEDIAN

**N**

SIDEWALKS

**N**

PARAPET

**N**

RAILING

**N**

See Approach guide rail.

PAINT

**N**

FENCE

**N**

DRAINS

**N**

LIGHTING STANDARD

**N**

UTILITIES TYPE/SIZE

**N**

Water main located in ballast on north side.

CONSTRUCTION JOINTS

**N**

EXPANSION JOINTS

**N**

### 59. SUPERSTRUCTURE

OVERALL RATING

**N**

### 60. SUBSTRUCTURE

OVERALL RATING

**N**

### 61. CHANNEL & CHANNEL PROTECTION

OVERALL RATING

**6**

#### RATING

CHANNEL SCOUR

**6**

No change from the last report which noted: previous scour at the outlet has undermined the culvert mitered ends, see photo.

EMBANKMENT EROSION

**4**

Heavy erosion at outlet and downstream, areas of exposed tree root systems & trees lean out over channel. See photo.

DEBRIS

**6**

Debris - Minor trash in downstream channel.

Obstruction - Sand encroachment at southeast outlet end.

VEGETATION

**6**

Embankments are well vegetated but show areas of erosion.

CHANNEL CHANGE

**6**

Freeboard approximately 6 feet - 8 inches.



Connecticut Department of Transportation  
Bridge Inspection Report BRI-18

5 of 7

BRIDGE #: 04546

INSPECTION DATE:

8/27/2004

61. CHANNEL & CHANNEL PROTECTIO

OVERALL RATING 6

Average waterdepth 3 to 8 inches.

Alignment - stream enters structure at slight angle to structure centerline from west & is slightly diverted by encroachment with vegetation upstream & sand encroachment downstream at the southeast.

FENDER SYSTEM N

SPUR DIKES & JETTIES N

RIP RAP 6

Additional rip rap needed at outlet to support mitered end treatment and to control erosion of slope between pipe ends.

Appears some riprap has been added at outlet end of pipe #1.

62. CULVERTS & RETAINING WALL

Two Span Asphalt Coated Corrugated Metal Pipe.

OVERALL RATING 5 4

RATING

BARREL 8

Barrel shape has good, smooth curvature, seams and joints are tight.

CONCRETE N

STEEL 5 4

Both barrels show some missing nuts at random plate connections and worn off protective coating mostly in lower area. Invert in both barrels shows moderate rusting generally thru-out. Invert in Barrel #2 at outlet mitered end shows areas of severe rusting and perforation holes ranging from few inches to 8-1/2 inches long by 1 to 2 inches +/- wide, see photo. See attached pipe measurement sheet.

TIMBER N

HEADWALL N

CUTOFF WALL N

DEBRIS 7

Minor accumulation of stones, silt in both barrels.

RETAINING WALL STEM N

FOOTING N

APPROACH CONDITION

OVERALL RATING 7

RATING

APPROACH SLAB N

RELIEF JOINTS N

APPROACH GUIDE RAIL 8

Flex beam rail with steel posts, minor scrapes.

APPROACH PAVEMENT 7

Bituminous Concrete show cracks and past crack sealing.

APPROACH EMBANKMENT 8

TRAFFIC SAFETY FEATURES:

BRIDGE RAILINGS N

TRANSITIONS N

APPROACH GUARDRAILS N

APPR. GUARDRAIL ENDS N

LOAD POSTING

SINGLE UNIT (TONS)

HS (TONS)

# Connecticut Department of Transportation

## Bridge Inspection Report BRI-18

BRIDGE #: **04546**

INSPECTION DATE: **8/27/2004**

4 AXLE (TONS)	<input type="checkbox"/>	
3S2 (TONS)	<input type="checkbox"/>	
ADVANCE WARNING Y/N	<input type="checkbox"/>	
LEGIBILITY	<input type="checkbox"/>	
VISIBILITY/LOCATION	<input type="checkbox"/>	

### MISC.

MIN VERT. UNDERCLR.	<input type="checkbox"/>	<input type="checkbox"/>	"	
POSTED CLR. UNDER BRIDGE	<input type="checkbox"/>	<input type="checkbox"/>	"	
POSTED CLR. ON BRIDGE	<input type="checkbox"/>	<input type="checkbox"/>	"	
ADVANCE WARNING (Y/N)	No			
SPEED LIMIT (IF ANY)	30	MPH		
CHARACTER OF TRAFFIC	Light volume, mostly residential.			

### ADDITIONAL NOTES

Bridge ID number located at outlet end of pipe #1 west side.

### ADDITIONAL COMMENTS:

Route inventory logged direction west to east. Up stream is north.

### Inspectors' Signatures:

1)	<u><i>Dennis T. Tarnat</i></u>	Date: <u>8-27-2004</u>
2)	<u><i>Richard A. Weiss</i></u>	Date: <u>8-27-04</u>
3)	_____	Date: <u>__/__/__</u>
4)	_____	Date: <u>__/__/__</u>

P.E. Signature: \_\_\_\_\_

Date: \_\_/\_\_/\_\_

P.E.#: \_\_\_\_\_

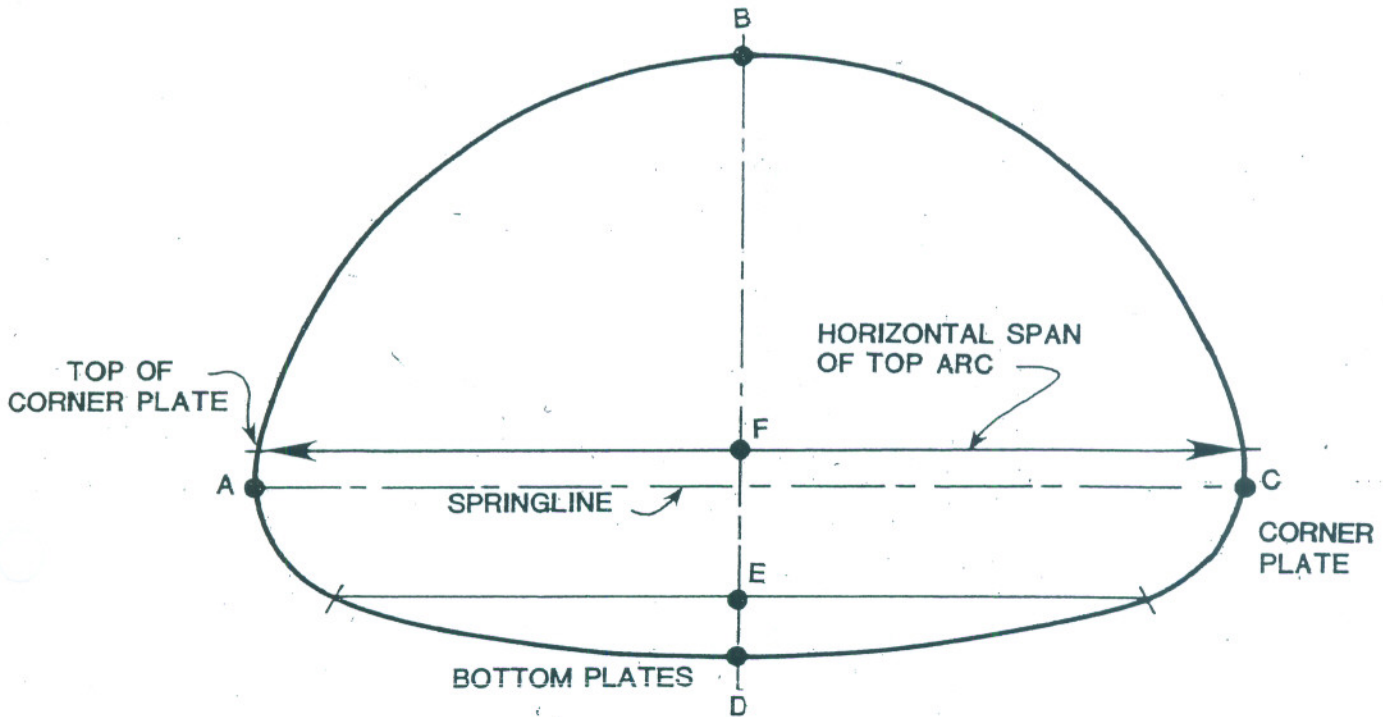
Reviewed by: \_\_\_\_\_

*Sandra A. Dumas*

CDOT

Date: 1/15/05





	Barrel	INLET	CENTER	OUTLET
AC	1	138 3/4"	139"	138 3/4"
	2	138 7/8"	139 3/4"	137 1/2"
BD	1	89"	89"	88"
	2	88"	86"	89 3/4"
AC	1	138 3/4"	139"	137"
BD	1	N/A	86"	88 1/2"
AC	2	138 7/8"	139 3/4"	137 1/2"
BD	2	87"	85 1/2"	89 3/4"

1. MINIMUM REQUIRED MEASUREMENTS - AC, BD

- SPAN = AC
- RISE = BD

2. IF AC EXCEEDS DESIGN BY 3% OR MORE  
MEASURE BF, ED, AND HORIZONTAL SPAN  
OF TOP ARC

CHANGES		
NO.	DATE	DESCRIPTION
REVISIONS		

## Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 04546

Agency ID: 04546

Sufficiency Rating: 0

## IDENTIFICATION

State 1: 09 Connecticut Struc Num 8: 04546  
 Facility Carried 7: TOMLINSON AVENUE Location 9: 600' FROM CYRENUS STREET  
 Rte.(On/Under)5A: Route On Structure Rte. Signing Prefix 5B: 5 City Street  
 Level of Service 5C: 0 None of the below Rte. Number 5D: 00000  
 Directional Suffix 5E: 0 N/A (NBI) % Responsibility: 0  
 SHD District 2: 01 County Code 3: Hartford  
 Place Code 4: PLAINVILLE Mile Post 11: 0.640 mi  
 Feature Intersected 8: QUINNIPIAC RIVER  
 Latitude 16: 41d 39' 48" Longitude 17: 072d 51' 12"  
 Border Bridge Code 98: Unknown (P)  
 Border Bridge Number 99: NA

## INSPECTION

Frequency 91: 24 months Inspection Date 90: 8/27/2004 Next Inspection: 08/27/2006  
 FC Frequency 92A: NA FC Inspection Date 93A: NA Next FC Inspection: NA  
 UW Frequency 92B: NA UW Inspection Date 93B: NA Next UW Inspection: NA  
 SI Frequency 92C: NA SI Date 93C: NA Next SI: NA  
 Element Frequency: 24 months Element Inspection Date: 08/27/2004 Next Elem. Insp. Due: 08/27/2006

## CLASSIFICATION

Defense Highway 100: 0 Not a STRAHNET hwy Parallel Structure 101: No || bridge exists  
 Direction of Traffic 102: 2 2-way traffic Temporary Structure 103: Unknown (NBI)  
 Highway System 104: 0 Not on NHS NBIS Length 112: Long Enough  
 Toll Facility 20: 3 On free road Functional Class 26: 19 Urban Local  
 Historical Significance 37: 5 Not eligible for NRHP  
 Owner 22: 3 Town/Township Hwy Agency  
 Custodian 21: 3 Town/Township Hwy Agency

## STRUCTURE TYPE AND MATERIALS

Number of Approach Spans 46: 0 Number of Spans Main Unit 45: 2  
 Main Span Material/Design 43A/B:  
 3 Steel 19 Culvert

Deck Type 107: N N/A (NBI)  
 Wearing Surface 108A: N N/A (no deck (NBI))  
 Membrane 108B: N N/A (no deck (NBI))  
 Deck Protection 108C: N N/A (no deck (NBI))

## CONDITION

Deck 58: N N/A (NBI) Super 59: N N/A (NBI) Sub 60: N N/A (NBI)  
 Culvert 62: 5 Moderate Damage Channel/Channel Protection 61: 6 Bank Slumping

## AGE AND SERVICE

Year Built 27: 1968 Year Reconstructed 106: Unknown  
 Type of Service on 42A: 1 Highway  
 Type of Service under 42B: 5 Waterway  
 Lanes on 28A: 2 Lanes Under 28B: 0 Detour Length 19: 1.9 mi  
 ADT 29: 2,000 Truck ADT 109: 2 % Year of ADT 30: 1990

## LOAD RATING AND POSTING

Inventory Rating Method 65: 1 LF Load Factor Operating Rating Method 63: 1 LF Load Factor  
 Inventory Rating 66: HS35.8 Operating Rating 64: HS54.6  
 Design Load 31: Unknown (NBI) Posting 70: 5 At/Above Legal Loads  
 Posting status 41: A Open, no restriction

## APPRAISAL

Bridge Rail 36A: N N/A or not required Approach Rail 36C: N N/A or not required  
 Transition 36B: N N/A or not required Approach Rail Ends 36D: N N/A or not required  
 Str. Evaluation 67: 5 Deck Geometry 68: N Not applicable (NBI)  
 Underclearance, Vertical and Horizontal 69: N Not applicable (NBI)  
 Waterway Adequacy 71: 5 Above Tolerable Approach Alignment 72: 8 Equal Desirable Crit  
 Scour Critical 113: 8 Stable Above Footing

## GEOMETRIC DATA

Length Max Span 48: 12.1 ft Structure Length 49: 24.9 ft  
 Curb/Sdwik Width L 50A: 0.0 ft Curb/Sidewalk Width R 50B: 0.0 ft  
 Width Curb to Curb 51: 0.0 ft Width Out to Out 52: 0.0 ft  
 Approach Roadway Width 32: 27.9 ft Median 33: 0 No median  
 Deck Area: . sq. ft  
 Skew 34: 19.00 \* Structure Flared 35: 0 No flare  
 Minimum Vertical Clearance Over Bridge 53: 328.1 ft  
 Minimum Vertical Underclearance Reference 54A: N Feature not hwy or RR  
 Minimum Vertical Underclearance 54B: 0.0 ft  
 Minimum Lateral Underclearance Reference R 55A: N Feature not hwy or RR  
 Minimum Lateral Underclearance R 55: 327.8 ft  
 Minimum Lateral Underclearance L 56: 0.0 ft

## PROPOSED IMPROVEMENTS

Bridge Cost 94: \$ 1,000 Type of Work 75: 38 Other Structural  
 Roadway Cost 95: \$ 1,000 Length of Improvement 76: 0.3 ft  
 Total Cost 96: \$ 2,000 Future ADT 114: 1,000  
 Year of Cost Estimate 97: 2000 Year of Future ADT 115: 2019

## NAVIGATION DATA

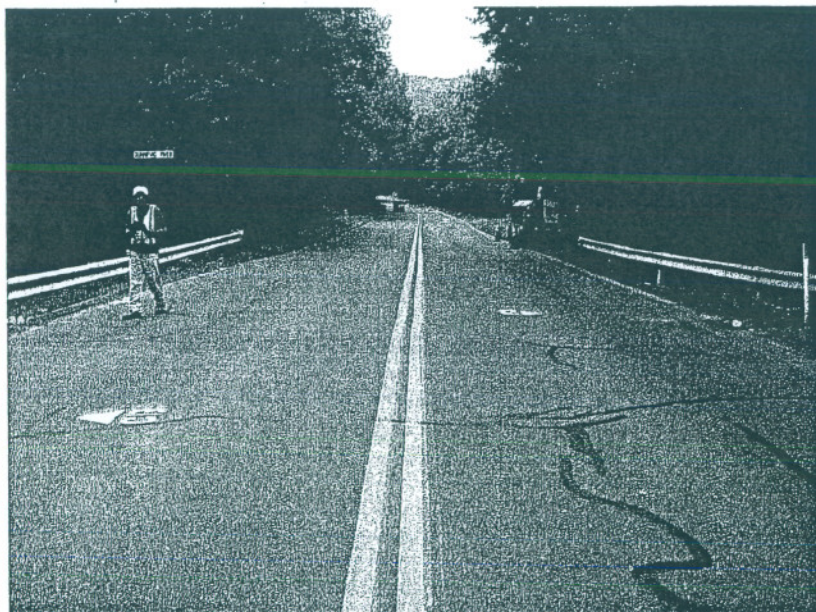
Navigation Control 38: 0 Permit Not Required  
 Vertical Clearance 39: 0.0 ft Horizontal Clearance 40: 0.0 ft  
 Pier Protection 111: Unknown (NBI) Lift Bridge Vertical Clearance 116:

## ELEMENT CONDITION STATE DATA

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
UNIT0	240/3	Steel Culvert	(LF)	141	77 %	112	15 %	20	8 %	10	0 %	0	0 %	0



<b>Bridge No.</b>	04546	<b>Inspected by:</b>	DENNIS TALMONT
<b>Town:</b>	Plainville	<b>Inspected by:</b>	KIRK WEIR
<b>Feature Carried:</b>	Tomlinson Avenue	<b>Date Inspected:</b>	Friday, August 27, 2004
<b>Feature Crossed:</b>	Quinnipiac River	<b>Project No.:</b>	



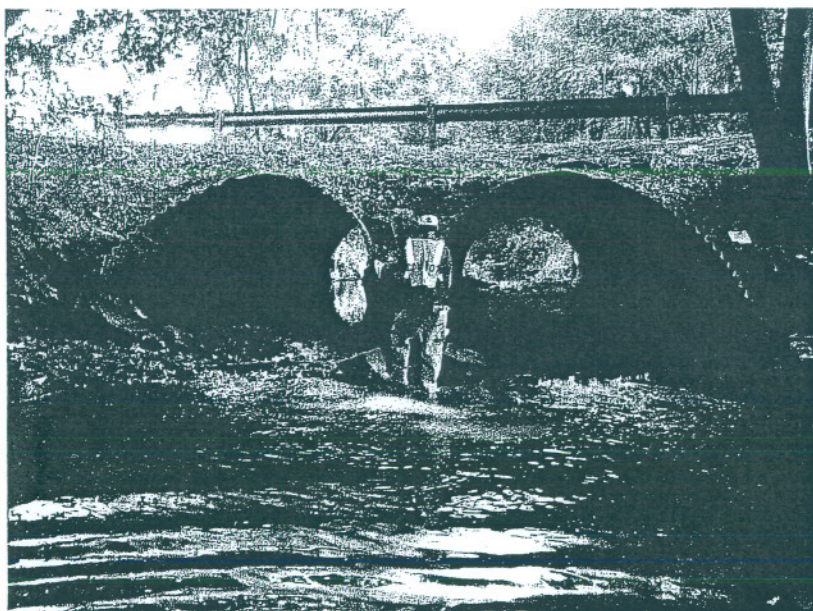
**Photo # 1**  
Looking East from the West approach. {Inspector at structure.}



**Photo # 2**  
Wearing surface.



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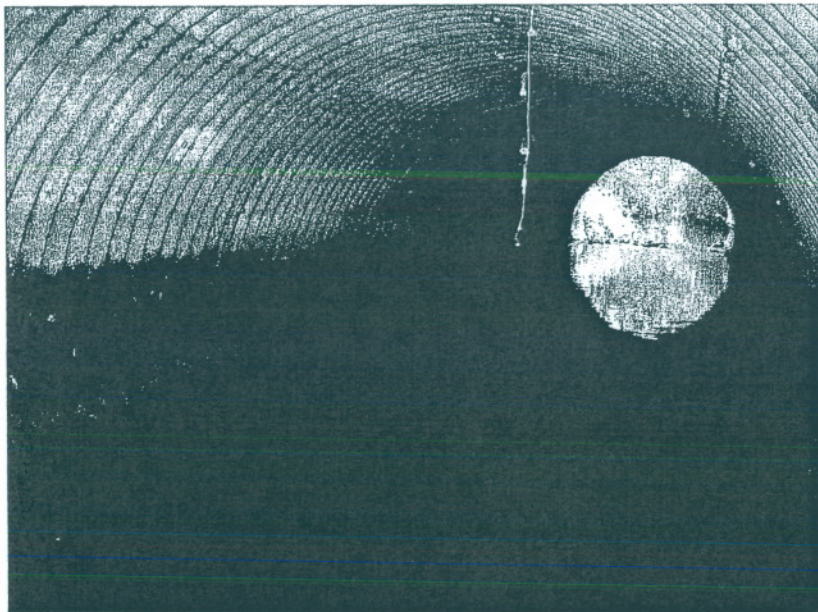
**Photo # 3**  
**Inlet.**



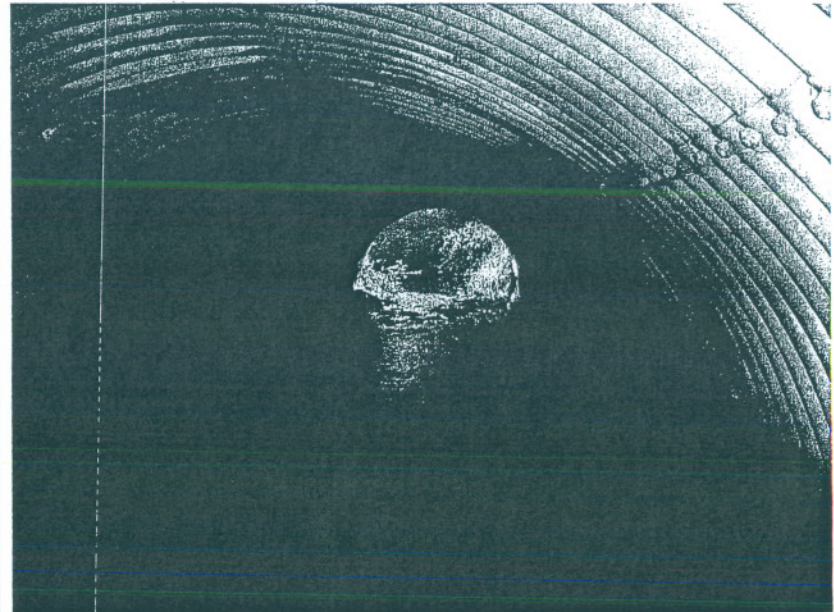
**Photo # 4**  
**Outlet.**



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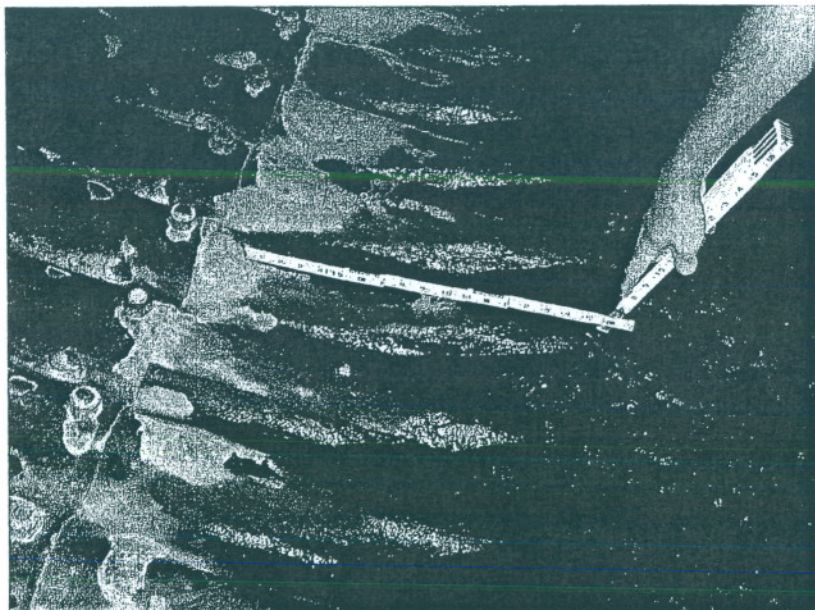
**Photo # 5**  
The interior of pipe # 1.



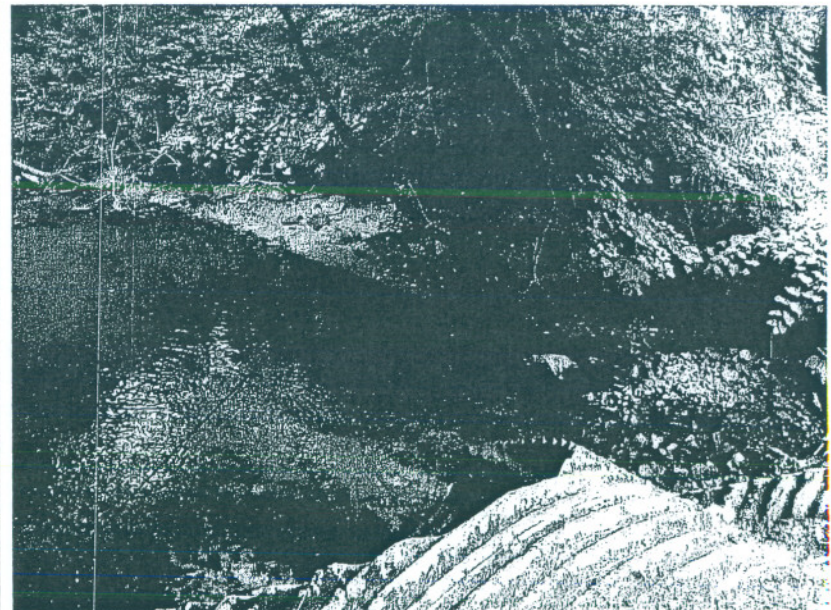
**Photo # 6**  
The interior of pipe # 2.



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**Photo # 7**  
Hole in the invert of pipe # 2, near outlet.



**Photo # 8**  
Exposed tree root's and heavy erosion at the Southwest embankment.



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**Photo # 9**  
Looking upstream from the inlet.



**Photo # 10**  
Looking downstream from the outlet.